

# PATENT SPECIFICATION



Application Date: Nov. 28, 1925. No. 30,133/25.

249,046

Complete Accepted: March 18, 1926.

## COMPLETE SPECIFICATION.

### Improvements in and relating to Illuminating Appliances.

We, HOLOPHANE LIMITED, a company organised and existing under the laws of Great Britain and Ireland, and ERNEST STROUD, a subject of the King of Great Britain and Ireland, all of Elverton Street, Vincent Square, London, S.W. 1, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to illuminating appliances of the kind comprising a tilted symmetrical glass shade fitting covered with radial totally reflecting prisms on its exterior surface, and shaped to give a narrow substantially parallel beam. Such appliances are used for example for shop window lighting.

According to this invention the outer main part of the shade is of parabolic contour to give the desired substantially parallel beam, while to allow of easy moulding the central portion is of spherical contour having an opening to one side of the principal axis through which the light source passes. The usual neck at this point is omitted and a narrow rim provided instead. The radial prisms comprise a series of main prisms of practically constant height which extend from the inner opening to the outer edge, with the exception of a slight break at the point where the contour of the bowl changes from spherical to parabolic. Between adjacent main prisms are three subsidiary prisms, two commencing with the same section as the main prisms at the outer edge of the bowl and decreasing to the point where the contour changes, and the other commencing at the outer edge with the full section which is maintained up to the change of contour and decreases towards the inner opening. The shade may be provided with a closely fitting outer metal shade to prevent the spread of transmitted

light, and with a tubular outer fitting by which the appliance is suspended and which carries the light source, usually an electric lamp. The whole appliance is held together by a flanged metal fitting passing through the inner opening of the shade and screwing into the tubular outer fitting. Finally, the light source carrier is made slidable within the tubular fitting so that focussing adjustments may be effected.

An embodiment of the invention is shown by way of example in the accompanying drawings, in which—

Figure 1 is a sectional view of the shade.

Figure 2 is a plan view of Figure 1.

Figure 3 is a sectional view through the tubular fitting showing the whole appliance assembled.

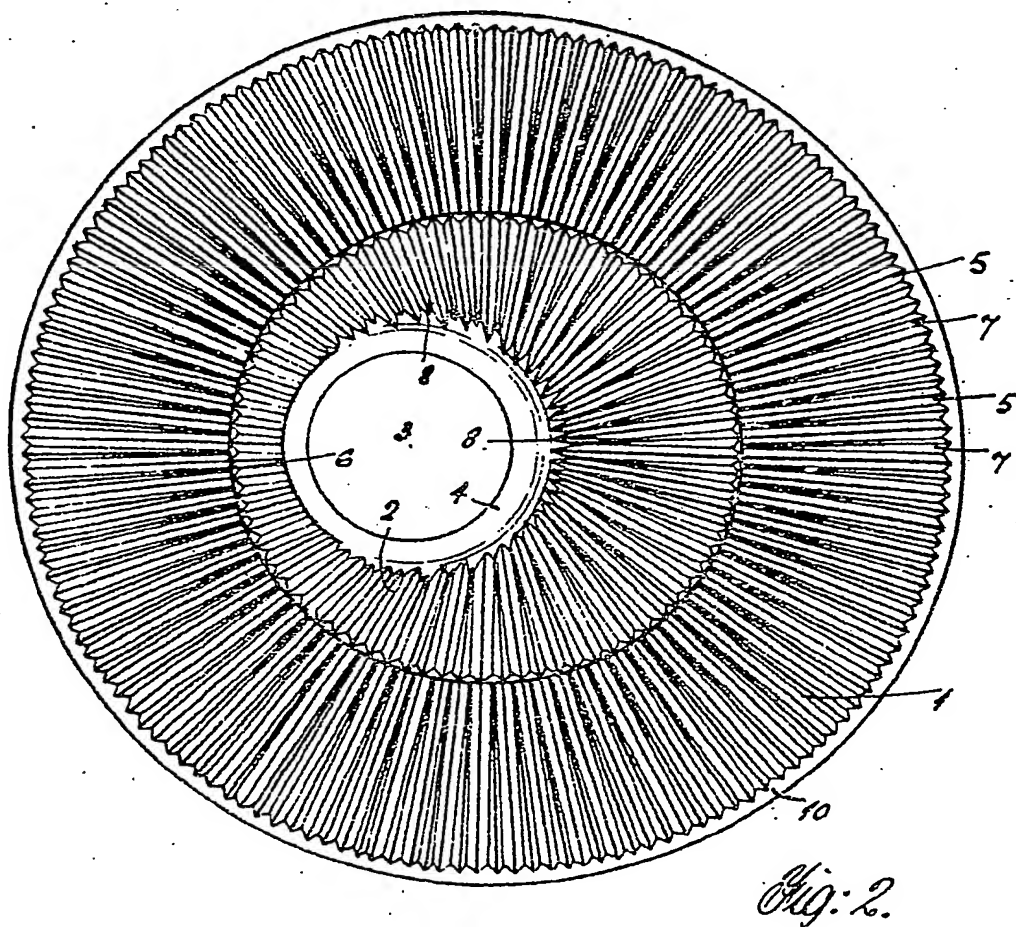
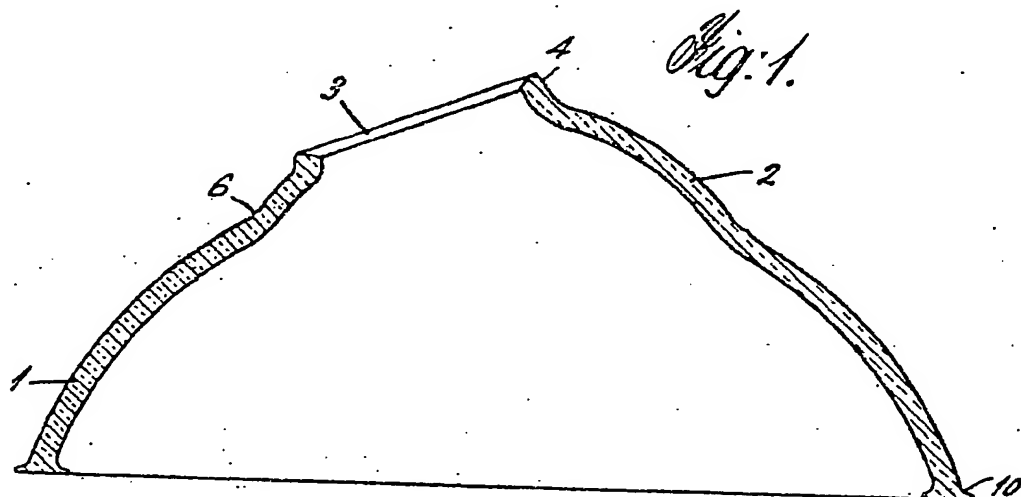
Figure 4 is a plan view of the tubular fitting, and

Figure 5 is a side view of Figure 3.

The shade comprises a portion 1 of parabolic contour and an inner portion 2 of spherical contour, having to one side an inner opening 3 through which the light source, such as an electric lamp is introduced. The opening 3 is surrounded by a narrow rim 4 by which the shade is held. The shade is symmetrical about a plane passing through the principal axis and the centre of the opening 3, and with the exception of the inner opening 3 and rim 4 is symmetrical about all planes passing through the principal axis. The exterior surface is covered with radial total reflecting prisms of the usual triangular section. These prisms comprise two groups, the main prisms 5 which are of substantially constant section and extend from the rim 4 to the outer edge of the shade, unbroken except at the junction 6, of the portions 1 and 2 of different contour; and subsidiary prisms 7 and 8 between adjacent main prisms 5. The prisms 7 extend from the

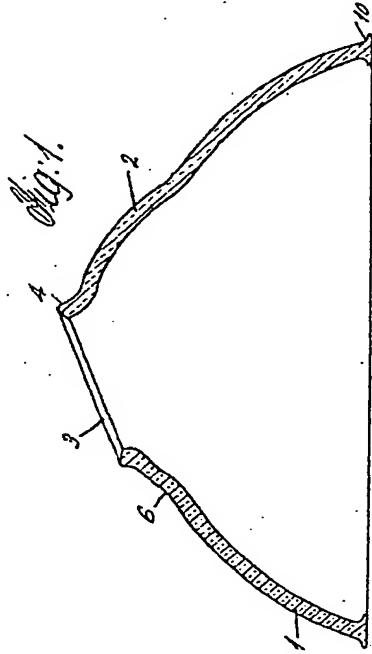
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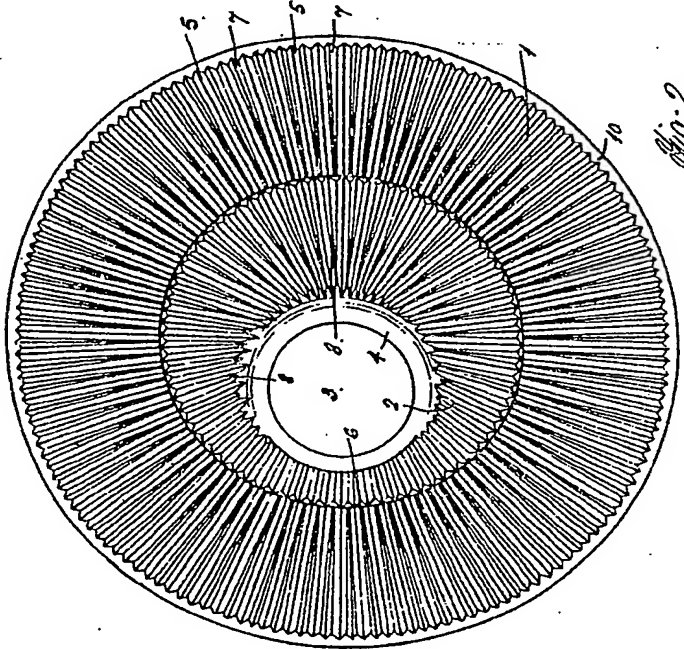
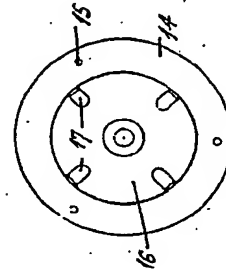
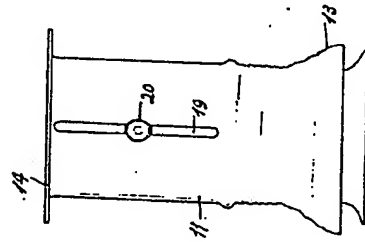
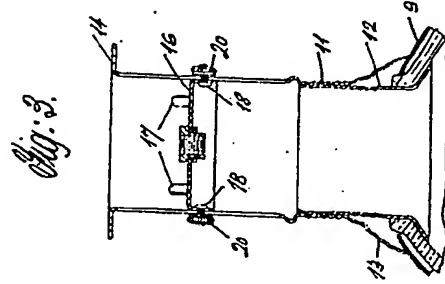


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2 SHEETS  
SHEET 2



SHEET 1



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